AI-Augmented Brainwriting: Investigating the use of LLMs in group ideation

Abstract

The growing availability of generative AI technologies such as large language models (LLMs) has significant implications for creative work. This paper explores twofold aspects of integrating LLMs into the creative process – the divergence stage of idea generation, and the convergence stage of evaluation and selection of ideas. We devised a collaborative group-AI Brainwriting ideation framework, which incorporated an LLM as an enhancement into the group ideation process, and evaluated the idea generation process and the resulted solution space. To assess the potential of using LLMs in the idea evaluation process, we design an evaluation engine and compared it to idea ratings assigned by three expert and six novice evaluators. Our findings suggest that integrating LLM in Brainwriting could enhance both the ideation process and its outcome. We also provide evidence that LLMs can support idea evaluation. We conclude by discussing implications for HCI education and practice.